



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/748,656	12/31/2003	Xianping Ge	0026-0068	2826
44989 7590 11/26/2008 HARRITY & HARRITY, LLP 11350 Random Hills Road SUITE 600 FAIRFAX, VA 22030				
EXAMINER				
LIE, ANGELA M				
ART UNIT		PAPER NUMBER		
2163				
MAIL DATE		DELIVERY MODE		
11/26/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/748,656

**Applicant(s)**

GE ET AL.

**Examiner**

ANGELA M. LIE

**Art Unit**

2163

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 August 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 3-14, 17-24 and 26-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3-11, 14, 18-24 and 26-34 is/are rejected.
- 7) ☒ Claim(s) 12 and 13 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### **Status of claims**

1. Claims 1, 3-14, 17-24 and 26-34 are currently pending.
2. Claims 2, 15, 16 and 25 are canceled.
3. Claims 32-35 are newly added.

### ***Claim Rejections - 35 USC § 101***

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 19-21 and 31 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. In particular, the rejected claims are directed toward a system and server device, however both of those systems do not recite hardware elements, thus the claims could be implemented in software per se, hence the claims are held non-statutory.

### ***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

7. The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

8. **Claims 1, 3, 7, 14, 17-24 and 26-34 are rejected under 35 U.S.C. 102(e) as being anticipated by Shultz et al (US Publication No. 2003/0061211), hereafter referred to as Shultz.**

**As to claims 1, 19, 20, 22 and 27,** Shultz discloses a method comprising: receiving a search query (Figure 2, element 202); determining a geographic location associated with the query (paragraph [0012]); determining a topic associated with the query (paragraph [0052], i.e. identifying subject matter (topic); determining a location sensitivity score that corresponds to a geographical range associated with the topic (paragraph [0053], wherein results are identified in association with location information and business information (topic)); determining topical scores for a set of documents based, at least in part, on the query ([paragraph [0060], wherein the results can be sorted based on the distance between a user and destination); determining a distance score for each document in the set of documents based, at least in part, on the location sensitivity score and a distance between a geographic location associated with the document and the geographic location associated with query (paragraph [0060], i.e. "sorting criterion might include, a distance from a user identified location (e.g., step

232), corresponding advertising information (e.g., step 234) and/or business information (e.g., step 236)"); and ordering the set of documents as a function of both the topical scores of the set of documents and the distance scores of the set of documents (paragraphs [0060] and [0061]).

**As to claims 3 and 7**, Shultz discloses the method wherein the function depends on the topical score and the distance score of each document in the set of documents (paragraph [0060]).

**As to claims 14, 21 and 26**, Shultz discloses the method wherein the ordering the set of documents includes: generating an overall score for each of the documents in the set of documents as a combination of the topical score and the distance score, and ordering the set of documents based, at least in part, on the overall scores (paragraph [0060], i.e. "sorting criterion might include, a distance from a user identified location (e.g., step 232), corresponding advertising information (e.g., step 234) and/or business information (e.g., step 236)"); and ordering the set of documents as a function of both the topical scores of the set of documents and the distance scores of the set of documents (paragraphs [0060] and [0061]).

**As to claims 17 and 18**, Shultz discloses the method wherein the documents are web pages or advertisements (paragraph [0020]).

**As to claims 23, 24 and 30**, Shultz discloses wherein the location sensitivity data is determined based, at least in part, on a user profile associated with a user (paragraph [0058], wherein user behavior with regard to prior search result is

represented by an action of a user, when he/she decides to change his/her listing criteria (in the user's profile) after receiving search results).

**As to claims 28 and 31**, Shultz discloses the method for presenting advertisements relevant to a target document (paragraph [0061]), comprising: analyzing the target document to identify a topic for the target document and a location associated with the target document (paragraph [0053] wherein business information corresponds to a topic); identifying targeting information for a plurality of advertisements (paragraph [0053], i.e. advertising information); comparing the targeting information to the topic to identify a set of potential advertisements (paragraph [0053], i.e. the step of identification); determining a distance score for at least one advertisement in the set of potential advertisements using an advertiser location associated with the one advertisement and the location associated with the target document (paragraph [0060], i.e. determining distance); ordering the set of potential advertisements based, at least in part, on the distance score of the at least one advertisement (paragraph [0060]); and presenting at least some of the ordered set of potential advertisements (paragraph [0061]).

**As to claim 29**, Shultz discloses the method further comprising: ranking the set of potential advertisements based, at least in part, on the comparing; and wherein the ordering the set of potential advertisements includes re-ranking at least some of the set of potential advertisements (paragraphs [0060] and [0061], wherein a user can set criteria for sorting results at least in part based on advertisement, and after new adds

are present, the sorting could be repeated, and order of the documents could be changed based on the updated advertisements).

**As to claim 33.** Shultz discloses the system where when scoring the document, the at least one server device is configured to score the document based (paragraph [0060], establish ranking), at least in part, on the geographic location associated with the document (paragraph [0052], wherein the distance from user's location to service provider's address is established, thus either one or another location could be interpreted as document's location because the specification does not supply clear explanation on what this location is), the location sensitivity data (paragraph [0052], wherein location sensitivity data includes business information and distance data), and a measure of relevance of the document to the search query (paragraph [0060], wherein returned documents are returned in response to submitted query and they reflect measure of relevance, furthermore since only returned documents (i.e. search results) are ranked, measure of those returned documents is considered).

**As to claim 34.** Shultz discloses the server where the means for identifying the topic for the target document includes means for analyzing a content of the target document to identify the topic for the target document (paragraph [0059], wherein information such as good and services are considered a topic and are extracted from a database associated with a retrieved document).

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. **Claims 4-6, 8, 9, 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shultz in view of Berkan et al (US Publication No. 2003/0074353), hereafter referred to as Berkan.**

**As to claims 4, 8, 9, 10, 11 and 32,** Shultz teaches all the limitations disclosed in claim 1, however he does not explicitly teaches the method wherein the topical score is higher for a more relevant one of the documents than a less relevant one of the documents, and the distance score is higher for one of the documents with the geographic location nearer to the geographic location associated with the query than another one of the documents with the geographic location further from the geographic location associated with the query. Berkan teaches answer retrieval technique wherein the results are ranked based on the score i.e. the most top result having the highest scores (paragraphs 42 and 150). It would have been obvious to one of the ordinary skill in the art during the time the invention was made to rank results in the descending order, wherein the top position would have the highest score, as taught by Berkan, because majority of match calculating algorithms lead to positive result, wherein each matching criteria increases the overall matching score. Therefore, if the document matches the query very well, the score would be also high. Once the score is



determined, the resulting documents can be put in order depending on their matching scores, therefore it would create additional complexity to reverse the matching scores so as to place the documents in the ascending order. Such an action based on the additional calculations requirement would slow down the processing time.

**As to claims 5 and 6**, Shultz teaches the method wherein determining distance score for the document includes calculating a distance from the document location to the location associated with the query (paragraph 81, lines 17-20). Shultz does not explicitly teach however, that the function used for the calculation of the score is monotonic. Berkan teaches the answer retrieval technique wherein score calculating function shows the monotonic behavior (Figs 8A-8D). It would have been obvious to one of ordinary skill in the art during the time the invention was made to use a monotonic function as taught by Berkan, in Shultz's sorting algorithm because this would simplify calculations (constant polarity) and therefore minimize the processing time.

***Allowable Subject Matter***

11. **Claims 12 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.**

**As to claim 12**, the prior art does not teach the method as disclosed in claim 1, wherein a first document in the set of document includes a corresponding first topical score and first distance score, a second document in the set of documents includes a corresponding second topical score higher than the first topical score and second

distance score lower than the first distance score, a third document in the set of documents includes corresponding third topical score higher than the first topical score and third distance score lower than the first distance score; and wherein the ordering the set of documents includes ordering the second document higher than the first document and the third document lower than the first document.

**As to claim 13**, the prior art does not teach the method as disclosed in claim 1, wherein a first document in the set of document includes a corresponding first topical score and first distance score, a second document in the set of documents includes a corresponding second topical score lower than the first topical score and second distance score higher than the first distance score, a third document in the set of documents includes corresponding third topical score lower than the first topical score and third distance score higher than the first distance score; and wherein the ordering the set of documents includes ordering the second document higher than the first document and the third document lower than the first document.

### ***Response to Arguments***

12. Applicant's arguments filed August 28, 2008 have been fully considered but they are not persuasive.
13. With respect to the arguments presented on page 13 stating that "'device" clearly falls within the statutory class of machine", and that the amendment introduced to claims 19-21, 27 and 31 make claims statutory, the Examiner agrees with this argument partially. In particular, claim 27 appears to be statutory because hardware element (i.e.

server device) is a part of the system's structure, in other words it is recited in the body of the claim. In contrast claims 19-21 and 31 recite "server device" in a preamble of the claims, but then the body of the claim could be purely implemented as software thus as far as the claim limitation go, the content of the claims 19-21 and 31 could be directed to non-statutory subject matter. Thus claims 19-21 and 31 remain rejected under 35 U.S.C. 101 and rejection addressing claim 27 is withdrawn.

14. *With respect to the Applicant's assertions on pages 14th, last paragraph, 15<sup>th</sup> last paragraph, 16th also last paragraph and 18<sup>th</sup> last paragraph, alleging that "Shultz et al. does not disclose or suggest determining a location sensitivity score that corresponds to a geographic range associated with a topic that is associated with a query, as recited in claim 1. In fact, Shultz et al. does not disclose or suggest a geographic range associated with a topic". On the bottom of page 15, the Applicant adds that "Shultz et al. does not disclose or remotely suggest determining a geographic range associated with the subject matter of the search, as would be required by claim 1 under this interpretation of Shultz et al. Thus, Shultz et al. does not disclose or suggest determining a location sensitivity score that corresponds to a geographical range associated with a topic associated with a query".*

15. The Examiner disagrees with the statements recited above. First of all, the Examiner would like to note that claim language regarding location sensitivity score is very vague, thus it is very unclear how this score is obtained or what exactly it encompasses. Furthermore, the Applicant is also silent with regards to the respective scores, are they actually numerical scores stored separately and then combined

together in order to arrive with the final score that will set an optimal rank? It always can be assumed what is possibly taking place resulting from claim language, however it should be clear that the claim language shall be definite and there should be no assumption as to what exactly takes place. Now looking at the Shultz reference, one skilled in the art would recognize that according to paragraph [0053], the score of a document can be determined based on the business information (i.e. topic, adds) as well as distance to the provider. It is important to note that paragraph [0053] discloses that all of the components of the rank could be used together, because Shultz uses "and". Moreover, as to the geographical range, the Examiner considers the distance from the user's location to a designated business address to constitute geographical range. Thus it should be clear that location sensitivity score is a combination of geographical range (i.e. distance) and other topical information associated with query and returned results such as business information.

16. *Bridging to page 17, the Applicant contends that "Shultz et al, cannot disclose or suggest determining a distance score for each document in the set of documents based, at least in part, on the location sensitivity score and a distance between a geographical location associated with the document and the geographic location associated with the query".*

17. The Examiner disagrees. It should be first noted that "location sensitivity score" according to the Applicant (page 16, last 3 lines) should correspond to a geographic range associated with a topic (considered by the Examiner as distance between user's location (query location) and business location (i.e. document location). Thus according

to this interpretation location sensitivity score is already related to geographical range. Furthermore distance score as previously noted by the Examiner in the most recent non-final rejection corresponds to a rank taught in paragraph [0060]. Consequently, the Examiner maintains that Shultz teaches all the limitations as currently claimed.

18. *Similarly to the previous argument, the Applicant continues arguing on page 17, last paragraph that "Shultz et al. does not disclose or suggest determining a distance score for each document in the set of document based, at least in part, on the location sensitivity score and a distance between a geographical location associated with the document and geographic location associated with the query".*

19. Again, the Examiner disagrees. According to paragraph [0060], for each retrieved result a rank score (i.e. distance score) is obtained, by looking at sorting criteria such as location sensitivity score (combination of business information and distance range) and distance (note that location sensitivity score already reflects the distance between a user and a business/document location).

20. *Furthermore, on page 20, the Applicant asserts that "Shultz et al. does not disclose or suggest determining a distance score for at least one advertisement in a set of potential advertisement using a geographic location of an advertiser associated with the one advertisement and a geographic location associated with a target document".*

21. The Examiner disagrees with the above statement. Firstly, in order to determine whether or not the prior art teaches the limitation disclosed above, it has to be first established what geographic location associated with a target document means. The Examiner attempted to gather more information about this location, however

unfortunately this feature is only discussed in paragraphs [0013] and [0054] of the published application, and there is no explicit explanation which would allow one skilled in the art to uniquely deduce what this phrase means or how it is obtained. Thus for the purposes of the examination, the Examiner interprets location associated with a target document as user's location since the target document is displayed on user's computer. Consequently the distance would be determined between advertiser's and user's geographical locations. If this interpretation is not in accord with interpretation that the Applicant intended, then the claim language should clearly disclose what particular limitations encompass. Furthermore, any amendments made to further clarify claimed subject matter should be consistent with the original specification to prevent introduction of new matter.

### ***Conclusion***

22. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).
23. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

***Inquiry***

24. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANGELA M. LIE whose telephone number is (571)272-8445. The examiner can normally be reached on M-F.

25. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on 571-272-1834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

26. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hung T Vy/  
Primary Examiner, Art Unit 2163

/Angela M Lie/  
Examiner, Art Unit 2163

